

SPECIFICATION

Please replace the title with the following replacement title.

SIMULTANEOUS BI-DIRECTIONAL CHANNEL SEPARATION TRANSMISSION AND RECEPTION OF SIGNALS IN DIFFERENT FREQUENCY BANDS OVER A BUS LINE

Please replace the paragraph starting on page 6 at line 12 with the following replacement paragraph:

For example, in the implementation shown in FIG. 4, the passbands and cutoff frequencies of filters 131, 161, 231, 261 and the combinational logic used by encoders 111, 211 are arbitrated between devices 11 and 21. Devices ~~1011~~ and ~~2021~~ each include a respective arbitration portion 191, 291 that arbitrates over an arbitration bus 301 connecting devices 11 and 21. Arbitration portions 191, 291 set the transmission and reception characteristics of the respective ~~of~~ transmitters 101, ~~210~~~~201~~ and receivers 151, 251. To this end, filters 131, 161, 231, and 261 are programmable and encoders 111, 181, 211, and 281 have combinational logic tables that include inputs originating from arbitration portions 191, 291, or otherwise respond to signals from arbitration portions 191, 291.

Please replace the paragraph starting on page 7 at line 21 with the following replacement paragraph:

Referring to FIG. 6, in another implementation, the passbands and cutoff frequencies of filters 132, 162, 232, 262 and the format of the combinational logic used by encoders 112, 212 are selected by the user. Devices ~~1012~~ and ~~2022~~ each include a respective selection portion 192, 292 that relies upon a user's selection made at a selection device 401 to set the transmission and reception characteristics of the respective transmitters 102, 202 and receivers 152, 252. Filters 132, 162, 232, 262 are programmable and encoders 112, 212, 182, 282 have combinational logic tables that include inputs originating from selection portions 192, 292, or otherwise respond to signals from selection portions 192, 292.